

#6/13(N8)  
85  
11-6-02  
Patents

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

**GIBBINS ET AL.**

Application No. 09/675,892

Filed: September 29, 2000

For: **SILVER-CONTAINING  
COMPOSITIONS, DEVICES  
AND METHODS FOR MAKING**



Art Unit: 3764

Examiner: L.M. Hamilton

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TECHNOLOGY CENTER R3700

**RESPONSE TO FINAL OFFICE ACTION**

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

In response to the Final Office Action mailed July 31, 2002 in the patent application identified above, Applicants respectfully request amendment of the application as follows. Applicants respectfully submit that the pending claims are allowed, or in condition for allowance.

*Agreed  
for entry  
11/5/02  
[Signature]*

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on October 30, 2002.

*[Signature]*  
Mary Anthony Merchant, Ph.D. - Reg. No. 39,771

**In the Specification**

Please delete the first full paragraph on page 1 of the specification, lines 18-23, and replace it with the following paragraph:

B, This application claims the priority of U.S. Provisional Patent Application No. 60/157,000, filed October 1, 1999, and U.S. Provisional Patent Application No. 60/212,455, filed June 19, 2000, and is a continuation-in-part of U.S. Patent Application No. 09/191,223, filed November 13, 1998, now U.S. Patent No. 6,355,858, which is a continuation-in-part of U.S. Patent No. 5,928,174. <sup>U.S. PAT. APP. NO. 08/191,223 FILED ON 11-14-97</sup>

**In the Claims**

Please cancel claims 1-9 and 17.

Please amend the following claims:

- 4  
C37  
B2
18. (Twice Amended) A method for making a matrix having antimicrobial activity, comprising,
- (a) adding, in no particular order, an anion-donating solution and a cation-donating solution to a polymeric matrix to form an active agent within and/or on the polymeric matrix; and
  - (b) adding to the polymeric matrix a stabilizing solution; and
- wherein the matrix allows for the sustained release of the active agent. *Mark and Dr. Friedman*

19. (Twice Amended) The method of Claim 18, wherein the active agent comprises a metal or metal salt. *A 12 F*

Please add the following new claims:

- 4  
B3  
C1
21. (New) The method of Claim 10, wherein the active agent is selected from the group consisting of antimicrobial agents, antifungal agents, antibacterial agents, anti-viral agents, antiparasitic agents, anaesthetics, mucopolysaccharides, metals, growth factors, proteins, angiogenic factors, wound healing agents and adjuvants. *Nov. F*

8  
22. (New) The method of Claim 21, wherein the antimicrobial agents are selected from the group consisting of isoniazid, ethambutol, pyrazinamide, streptomycin, clofazimine, rifabutin, fluoroquinolones, ofloxacin, sparfloxacin, rifampin, azithromycin, clarithromycin, dapson, tetracycline, erythromycin, ciprofloxacin, doxycycline, ampicillin, amphotericin B, ketoconazole, fluconazole, pyrimethamine, sulfadiazine, clindamycin, lincomycin, pentamidine, atovaquone, paromomycin, diclazaril, acyclovir, trifluorouridine, foscarnet, penicillin, gentamicin, ganciclovir, iatroconazole, miconazole, Zn-pyrithione, silver salts, chloride, bromide, iodide and periodate.

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23. (New) The method of Claim 21, wherein the growth factors are selected from the group consisting of basic fibroblast growth factor, acidic fibroblast growth factor, nerve growth factor, epidermal growth factor, insulin-like growth factors 1 and 2, platelet derived growth factor, tumor angiogenesis factor, vascular endothelial growth factor, corticotropin releasing factor, transforming growth factors  $\alpha$  and  $\beta$ , interleukin-8, granulocyte-macrophage colony stimulating factor, interleukins, and interferons.

10  
24. (New) The method of Claim 21, wherein the mucopolysaccharides are selected from the group consisting of heparin, heparin sulfate, heparinoids, dermatan sulfate, pentosan polysulfate, chondroitin sulfate, hyaluronic acid, cellulose, agarose, chitin, dextran, carrageenin, linoleic acid, and allantoin.

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25. (New) The method of Claim 21, wherein the proteins are selected from the group consisting of collagen, cross-linked collagen, fibronectin, laminin, elastin, cross-linked elastin, antibodies, and combination and fragments thereof.

26. (New) The method of Claim 10, wherein the polymeric matrix comprises a natural or synthetic polymer.

27. (New) The method of Claim 10 further comprising a water loss control agent, a plasticizer, and a hydration control agent.

<sup>14</sup> 28. (New) The method of Claim <sup>13</sup> ~~27~~, wherein the water loss control agent is selected from the group consisting of petrolatum, glycolipids, ceramides, free fatty acids, cholesterol, triglycerides, steryl esters, cholesteryl sulfate, linoleic ethyl ester and silicone oil.

<sup>15</sup> <sup>13</sup> ~~29~~. (New) The method of Claim ~~27~~, wherein the plasticizer is selected from the group consisting of glycerol, water, propylene glycol and butanol.

<sup>16</sup> <sup>13</sup> ~~30~~. (New) The method of Claim ~~27~~, wherein the hydration control agent is selected from the group consisting of isopropyl alcohol, ethanol, glycerol, butanol, and propylene glycol.

### **REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and remarks. Claims 10-16 have been allowed. Claims 1-9, and 17 have been cancelled. Claim 18 has been amended, according to the Examiner's instructions, to place this claim and dependent Claims 19-20 in condition for allowance. Claim 19 has been amended to correct a typographical error. Claims 21-30 have been added. Support for Claims 21-30 can be found on pages 16-19 of the specification. No new matter has been added by the amendments or additional claims. After entry of the present amendments, Claims 10-16 and 18-30 will be pending.

### **Formalities**

The Examiner objected to Claims 18-20 as being dependent upon a rejected base claim, Claim 17. The Examiner stated that these claims would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims. Applicants have amended Claim 18 to include the limitations of base Claim 17. Dependent Claims 19 and 20 now include all the limitations of amended Claim 18. Therefore, Claims 18-20 are now in condition for allowance. Applicants respectfully request the Examiner to withdraw his objection to Claims 18-20.

### **Rejection of Claims 1-6 under 35 U.S.C. §103(a)**

The Examiner rejected Claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,196,190 to *Nangia et al.* (hereinafter *Nangia*). Applicants have cancelled Claims 1-6, rendering this rejection moot. Therefore, Applicants respectfully request the withdrawal of this rejection.

### **Rejection of Claims 7-9 and 17 under 35 U.S.C. §103(a)**

The Examiner rejected Claims 7-9 and 17 under 35 U.S.C. §103(a), as being unpatentable over *Nangia* in view of U.S. Patent 3,092,552 to *Romans*. Applicants have cancelled Claims 7-9 and 17, rendering this rejection moot. Therefore, Applicants respectfully request the withdrawal of this rejection.

**Version to Show Changes Made**

**In the Specification**

Pursuant to 37 C.F.R. §1.121(b), the following replacement paragraphs show all the changes made by the foregoing amendment relative to the previous version of the specification, with deleted text shown in [brackets] and added text shown in underlining.

The first full paragraph on page 1 of the specification, lines 18-23, was replaced with the following paragraph:

This application claims the priority of U.S. Provisional Patent Application No. 60/157,000, filed October 1, 1999, and U.S. Provisional Patent Application No. 60/212,455, filed June 19, 2000, and is a continuation-in-part of U.S. Patent Application No. 09/191,223, filed November 13, 1998, now U.S. Patent No. 6,355,858, which is a continuation-in-part of U.S. Patent No. 5,928,174.

**In the Claims**

Pursuant to 37 C.F.R. §1.121(c), a version of the rewritten claims, marked up to show all the changes relative to the previous version of the claims, is now set forth with deleted text shown in [brackets] and added text shown in underline.

18. (Twice Amended) [The method of Claim 17,] A method for making a matrix having antimicrobial activity, comprising,

(a) adding, in no particular order, an anion-donating solution and a cation-donating solution to a polymeric matrix to form an active agent within and/or on the polymeric matrix; and

(b) adding to the polymeric matrix a stabilizing solution; and  
wherein the matrix allows for the sustained release of the active agent.

AG + Cl<sup>-</sup> = AgCl

19. (Twice Amended) The method of Claim 18, wherein the active agent [comprise] comprises a metal or metal salt.

**New Claims 21-30 have been added.**

B

CONCLUSION

The foregoing is a complete response to the Office Action mailed July 31, 2002. Applicants respectfully submit that Claims 10-16 are allowed, and 18-30 are in condition for allowance. Early and favorable consideration is solicited.

No fees are believed due; however, the Commissioner is hereby authorized to charge any deficiencies which may be required, or credit any over payment, to deposit account No. 11-0855.

If the Examiner believes that there are other issues that can be resolved by a telephone interview, or that there are any informalities that remain in the application, which may be corrected by the Examiner's amendment, a telephone call to the undersigned attorney at (404) 815-6500 is respectfully solicited.

Respectfully submitted,



By: Mary Anthony Merchant, Ph.D.

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